

RAW SEQUENCE LISTING

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Application Serial Number: 10/534,894
Source: PCT
Date Processed by STIC: 5-25-05

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PCT

RAW SEQUENCE LISTING

DATE: 05/25/2005

PATENT APPLICATION: US/10/534,894

TIME: 11:40:08

Input Set : A:\PTO.RJ.txt

Output Set: N:\CRF4\05252005\J534894.raw

3 <110> APPLICANT: SHANGHAI INSTITUTES FOR BIOLOGICAL SCIENCES, CAS
 5 <120> TITLE OF INVENTION: METHOD OF DIAGNOSING AND TREATING BALDNESS USING HUMAN AND
 MOUSE RHOR
 6 GENE AND CODED PRODUCT THEREOF
 8 <130> FILE REFERENCE: 026816 pc
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/534,894
 C--> 10 <141> CURRENT FILING DATE: 2005-05-13
 10 <150> PRIOR APPLICATION NUMBER: CN 02145353.9
 11 <151> PRIOR FILING DATE: 2002-11-13
 13 <160> NUMBER OF SEQ ID NOS: 14
 15 <170> SOFTWARE: PatentIn version 3.1
 17 <210> SEQ ID NO: 1
 18 <211> LENGTH: 2484
 19 <212> TYPE: DNA
 20 <213> ORGANISM: Mus musculus
 22 <220> FEATURE:
 23 <221> NAME/KEY: CDS
 24 <222> LOCATION: (1)..(2481)
 25 <223> OTHER INFORMATION:
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 30 Met Ala Ser Ala Asp Lys Asn Gly Ser Asn Leu Pro Ser Val Ser Gly
 31 1 5 10 15
 33 agc cgc ctg cag agc cgg aag cca ccc aac ctc tcc atc acc atc ccg 96
 34 Ser Arg Leu Gln Ser Arg Lys Pro Pro Asn Leu Ser Ile Thr Ile Pro
 35 20 25 30
 37 cca cca gag agc cag gcc ccc ggc gag cag gat agc atg ctt cct gag 144
 38 Pro Pro Glu Ser Gln Ala Pro Gly Glu Gln Asp Ser Met Leu Pro Glu
 39 35 40 45
 41 agg cgc aag aac cca gcc tac ctg aag agt gtc agc cta cag gag ccc 192
 42 Arg Arg Lys Asn Pro Ala Tyr Leu Lys Ser Val Ser Leu Gln Glu Pro
 43 50 55 60
 45 cgg gga cga tgg cag gag ggc gca gag aag cgc ccc ggc ttc cgc cgc 240
 46 Arg Gly Arg Trp Gln Glu Gly Ala Glu Lys Arg Pro Gly Phe Arg Arg
 47 65 70 75 80
 49 cag gcc tcc ctg tcc cag agc atc cgc aag agc aca gcc cag tgg ttt 288
 50 Gln Ala Ser Leu Ser Gln Ser Ile Arg Lys Ser Thr Ala Gln Trp Phe
 51 85 90 95
 53 ggg gtc agc ggc gac tgg gag ggc aag cga caa aac tgg cat cgt cgc 336
 54 Gly Val Ser Gly Asp Trp Glu Gly Lys Arg Gln Asn Trp His Arg Arg
 55 100 105 110
 57 agc ctg cac cac tgc agc gtg cac tat ggc cgc ctc aag gcc tcg tgc 384
 58 Ser Leu His His Cys Ser Val His Tyr Gly Arg Leu Lys Ala Ser Cys
 59 115 120 125

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61 cag aga gaa ctg gag ctg ccc agc cag gag gtg cca tcc ttc cag ggc      432
62 Gln Arg Glu Leu Glu Leu Pro Ser Gln Glu Val Pro Ser Phe Gln Gly
63      130                      135                      140
65 act gag tct cca aaa ccg tgc aag atg ccc aag att gtg gat cca ctg      480
66 Thr Glu Ser Pro Lys Pro Cys Lys Met Pro Lys Ile Val Asp Pro Leu
67 145                      150                      155                      160
69 gct cgg ggt agg gcc ttc cgc cat cca gat gag gtg gac cgg cct cac      528
70 Ala Arg Gly Arg Ala Phe Arg His Pro Asp Glu Val Asp Arg Pro His
71                      165                      170                      175
73 gct gcc cac cca cct ctg act cca ggg gtc ctg tct ctc aca tcc ttc      576
74 Ala Ala His Pro Pro Leu Thr Pro Gly Val Leu Ser Leu Thr Ser Phe
75                      180                      185                      190
77 acc agt gtc cgc tct ggc tac tcc cat ctg ccc cgc cgc aag agg ata      624
78 Thr Ser Val Arg Ser Gly Tyr Ser His Leu Pro Arg Arg Lys Arg Ile
79                      195                      200                      205
81 tct gtt gcc cat atg agc ttt cag gca gcc gcc gcc ctc ctc aag ggg      672
82 Ser Val Ala His Met Ser Phe Gln Ala Ala Ala Ala Leu Leu Lys Gly
83                      210                      215                      220
85 cgt tcc gtg cta gat gcg act ggg cag cgg tgc cgg cat gtc aaa cgc      720
86 Arg Ser Val Leu Asp Ala Thr Gly Gln Arg Cys Arg His Val Lys Arg
87 225                      230                      235                      240
89 agc ttc gct tac ccc agc ttc ctg gag gag gat gct gtc gat gga gct      768
90 Ser Phe Ala Tyr Pro Ser Phe Leu Glu Glu Asp Ala Val Asp Gly Ala
91                      245                      250                      255
93 gac acc ttc gac tcc tcc ttt ttt agt aag gaa gaa atg agc tcc atg      816
94 Asp Thr Phe Asp Ser Ser Phe Phe Ser Lys Glu Glu Met Ser Ser Met
95                      260                      265                      270
97 cct gac gat gtc ttt gag tcc ccc cca ctc tct gcc agc tac ttc cga      864
98 Pro Asp Asp Val Phe Glu Ser Pro Pro Leu Ser Ala Ser Tyr Phe Arg
99                      275                      280                      285
101 ggt gtc cca cac tct gcc tcc ccg gtc tcc ccg gat gga gtg cac atc      912
102 Gly Val Pro His Ser Ala Ser Pro Val Ser Pro Asp Gly Val His Ile
103                      290                      295                      300
105 ccg cta aaa gaa tac agc ggt ggc cga gcc ctg ggt ccc ggg acc cag      960
106 Pro Leu Lys Glu Tyr Ser Gly Gly Arg Ala Leu Gly Pro Gly Thr Gln
107 305                      310                      315                      320
109 cgt ggc aaa cgc att gcc tcc aaa gta aag cac ttt gca ttt gac cgg      1008
110 Arg Gly Lys Arg Ile Ala Ser Lys Val Lys His Phe Ala Phe Asp Arg
111                      325                      330                      335
113 aag aag agg cac tac ggc ctg ggt gtc gtg ggt aac tgg ctc aac cga      1056
114 Lys Lys Arg His Tyr Gly Leu Gly Val Val Gly Asn Trp Leu Asn Arg
115                      340                      345                      350
117 agc tat cga cgc agc atc agc agc acc gtg cag cgg cag ctg gag agc      1104
118 Ser Tyr Arg Arg Ser Ile Ser Ser Thr Val Gln Arg Gln Leu Glu Ser
119                      355                      360                      365
121 ttc gat agc cac cgg ccc tac ttc acc tac tgg ctg acg ttc gtt cac      1152
122 Phe Asp Ser His Arg Pro Tyr Phe Thr Tyr Trp Leu Thr Phe Val His
123                      370                      375                      380
125 atc atc atc acc ttg ctg gtg atc tgc acc tat ggc atc gca cct gtg      1200

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126	Ile	Ile	Ile	Thr	Leu	Leu	Val	Ile	Cys	Thr	Tyr	Gly	Ile	Ala	Pro	Val	
127	385					390					395					400	
129	ggc	ttt	gcc	cag	cac	gtt	acc	acc	cag	ctg	gtg	ctg	aag	aac	aga	ggc	1248
130	Gly	Phe	Ala	Gln	His	Val	Thr	Thr	Gln	Leu	Val	Leu	Lys	Asn	Arg	Gly	
131				405					410						415		
133	gtg	tat	gag	agc	gtg	aag	tac	atc	cag	cag	gag	aac	ttc	tgg	att	ggc	1296
134	Val	Tyr	Glu	Ser	Val	Lys	Tyr	Ile	Gln	Gln	Glu	Asn	Phe	Trp	Ile	Gly	
135				420					425					430			
137	ccc	agc	tcg	att	gac	ctc	att	cac	ctg	gga	gca	aag	ttc	tcg	ccc	tgc	1344
138	Pro	Ser	Ser	Ile	Asp	Leu	Ile	His	Leu	Gly	Ala	Lys	Phe	Ser	Pro	Cys	
139			435					440					445				
141	atc	cgg	aag	gac	cag	caa	att	gag	cag	ctg	gta	cgg	agg	gag	cgc	gac	1392
142	Ile	Arg	Lys	Asp	Gln	Gln	Ile	Glu	Gln	Leu	Val	Arg	Arg	Glu	Arg	Asp	
143		450				455					460						
145	att	gag	cgc	acc	tct	ggc	tgc	tgt	gtc	cag	aat	gac	cgc	tcg	ggc	tgc	1440
146	Ile	Glu	Arg	Thr	Ser	Gly	Cys	Cys	Val	Gln	Asn	Asp	Arg	Ser	Gly	Cys	
147	465					470				475						480	
149	atc	cag	acc	ctg	aag	aag	gac	tgc	tcg	gag	act	tta	gcc	acg	ttc	gta	1488
150	Ile	Gln	Thr	Leu	Lys	Lys	Asp	Cys	Ser	Glu	Thr	Leu	Ala	Thr	Phe	Val	
151				485					490						495		
153	aag	tgg	cag	aat	gat	act	ggg	ccc	tca	gac	aag	tct	gac	ctg	agc	cag	1536
154	Lys	Trp	Gln	Asn	Asp	Thr	Gly	Pro	Ser	Asp	Lys	Ser	Asp	Leu	Ser	Gln	
155			500					505					510				
157	aag	cag	cca	tcg	gcg	gtt	gtg	tgc	cac	caa	gac	ccc	agg	acc	tgt	gaa	1584
158	Lys	Gln	Pro	Ser	Ala	Val	Val	Cys	His	Gln	Asp	Pro	Arg	Thr	Cys	Glu	
159		515						520					525				
161	gag	cct	gcc	tcc	agt	ggg	gcc	cac	atc	tgg	cct	gat	gac	att	acc	aag	1632
162	Glu	Pro	Ala	Ser	Ser	Gly	Ala	His	Ile	Trp	Pro	Asp	Asp	Ile	Thr	Lys	
163		530				535					540						
165	tgg	ccg	atc	tgc	aca	gag	cag	gct	cag	agc	aac	cac	acg	ggc	ttg	ttg	1680
166	Trp	Pro	Ile	Cys	Thr	Glu	Gln	Ala	Gln	Ser	Asn	His	Thr	Gly	Leu	Leu	
167	545					550				555					560		
169	cac	ata	gac	tgt	aag	atc	aaa	ggc	cgc	ccc	tgc	tgc	atc	ggc	acc	aag	1728
170	His	Ile	Asp	Cys	Lys	Ile	Lys	Gly	Arg	Pro	Cys	Cys	Ile	Gly	Thr	Lys	
171				565					570					575			
173	ggc	agc	tgc	gag	atc	acc	act	cgg	gag	tac	tgt	gag	ttc	atg	cat	ggc	1776
174	Gly	Ser	Cys	Glu	Ile	Thr	Thr	Arg	Glu	Tyr	Cys	Glu	Phe	Met	His	Gly	
175			580					585					590				
177	tat	ttc	cat	gaa	gac	gcg	acg	ctg	tgt	tcc	cag	gtg	cac	tgt	tta	gac	1824
178	Tyr	Phe	His	Glu	Asp	Ala	Thr	Leu	Cys	Ser	Gln	Val	His	Cys	Leu	Asp	
179			595					600					605				
181	aag	gtg	tgt	ggg	ctc	ctg	cct	ttc	ctc	aac	cct	gag	gtc	cct	gac	cag	1872
182	Lys	Val	Cys	Gly	Leu	Leu	Pro	Phe	Leu	Asn	Pro	Glu	Val	Pro	Asp	Gln	
183		610				615						620					
185	ttc	tac	cgg	atc	tgg	ctg	tct	tta	ttc	ctg	cat	gct	ggc	ata	gtg	cac	1920
186	Phe	Tyr	Arg	Ile	Trp	Leu	Ser	Leu	Phe	Leu	His	Ala	Gly	Ile	Val	His	
187	625					630				635					640		
189	tgc	ctt	gtg	tct	gtg	gtc	ttc	caa	atg	acc	atc	ctg	agg	gac	cta	gag	1968
190	Cys	Leu	Val	Ser	Val	Val	Phe	Gln	Met	Thr	Ile	Leu	Arg	Asp	Leu	Glu	

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191          645          650          655
193 aag ctg gcc ggc tgg cac cgc atc tcc atc atc ttc atc ctt agt ggc      2016
194 Lys Leu Ala Gly Trp His Arg Ile Ser Ile Ile Phe Ile Leu Ser Gly
195          660          665          670
197 att aca ggc aac ctg gcc agc gcc atc ttc ctc ccc tac cgg gca gag      2064
198 Ile Thr Gly Asn Leu Ala Ser Ala Ile Phe Leu Pro Tyr Arg Ala Glu
199          675          680          685
201 gtg ggc cca gcc ggg tcg cag ttc gcc ctc ctc gcc tgc ctc ttc gtg      2112
202 Val Gly Pro Ala Gly Ser Gln Phe Gly Leu Leu Ala Cys Leu Phe Val
203          690          695          700
205 gag ctg ttc cag agc tgg cag ctg ttg gag cgg ccg tgg aag gcc ttc      2160
206 Glu Leu Phe Gln Ser Trp Gln Leu Leu Glu Arg Pro Trp Lys Ala Phe
207 705          710          715          720
209 ttc aac ctg tcg gcc att gtg ctt ttc ctc ttc atc tgt ggc ctc ctg      2208
210 Phe Asn Leu Ser Ala Ile Val Leu Phe Leu Phe Ile Cys Gly Leu Leu
211          725          730          735
213 ccc tgg ata gac aac atc gcc cac atc ttc ggg ttc ctc agc ggc atg      2256
214 Pro Trp Ile Asp Asn Ile Ala His Ile Phe Gly Phe Leu Ser Gly Met
215          740          745          750
217 ctt ctg gcc ttc gcc ttc ctg cct tac att acc ttc ggc acc agc gac      2304
218 Leu Leu Ala Phe Ala Phe Leu Pro Tyr Ile Thr Phe Gly Thr Ser Asp
219          755          760          765
221 aag tac cgc aag cga gcc ctc atc ctc gtg tcg ctg ctg gtc ttt gct      2352
222 Lys Tyr Arg Lys Arg Ala Leu Ile Leu Val Ser Leu Leu Val Phe Ala
223          770          775          780
225 ggg ctc ttt gct tcc ctg gtg ctg tgg ctg tac atc tac ccc atc aac      2400
226 Gly Leu Phe Ala Ser Leu Val Leu Trp Leu Tyr Ile Tyr Pro Ile Asn
227 785          790          795          800
229 tgg ccc tgg atc gag tac ctc acc tgc ttt ccc ttc acc agc cgc ttc      2448
230 Trp Pro Trp Ile Glu Tyr Leu Thr Cys Phe Pro Phe Thr Ser Arg Phe
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240 <212> TYPE: PRT
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250          20          25          30
253 Pro Pro Glu Ser Gln Ala Pro Gly Glu Gln Asp Ser Met Leu Pro Glu
254          35          40          45
257 Arg Arg Lys Asn Pro Ala Tyr Leu Lys Ser Val Ser Leu Gln Glu Pro
258          50          55          60
261 Arg Gly Arg Trp Gln Glu Gly Ala Glu Lys Arg Pro Gly Phe Arg Arg
262 65          70          75          80

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265 Gln Ala Ser Leu Ser Gln Ser Ile Arg Lys Ser Thr Ala Gln Trp Phe
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269 Gly Val Ser Gly Asp Trp Glu Gly Lys Arg Gln Asn Trp His Arg Arg
270      100      105      110
273 Ser Leu His His Cys Ser Val His Tyr Gly Arg Leu Lys Ala Ser Cys
274      115      120      125
277 Gln Arg Glu Leu Glu Leu Pro Ser Gln Glu Val Pro Ser Phe Gln Gly
278      130      135      140
281 Thr Glu Ser Pro Lys Pro Cys Lys Met Pro Lys Ile Val Asp Pro Leu
282 145      150      155      160
285 Ala Arg Gly Arg Ala Phe Arg His Pro Asp Glu Val Asp Arg Pro His
286      165      170      175
289 Ala Ala His Pro Pro Leu Thr Pro Gly Val Leu Ser Leu Thr Ser Phe
290      180      185      190
293 Thr Ser Val Arg Ser Gly Tyr Ser His Leu Pro Arg Arg Lys Arg Ile
294      195      200      205
297 Ser Val Ala His Met Ser Phe Gln Ala Ala Ala Leu Leu Lys Gly
298      210      215      220
301 Arg Ser Val Leu Asp Ala Thr Gly Gln Arg Cys Arg His Val Lys Arg
302 225      230      235      240
305 Ser Phe Ala Tyr Pro Ser Phe Leu Glu Glu Asp Ala Val Asp Gly Ala
306      245      250      255
309 Asp Thr Phe Asp Ser Ser Phe Phe Ser Lys Glu Glu Met Ser Ser Met
310      260      265      270
313 Pro Asp Asp Val Phe Glu Ser Pro Pro Leu Ser Ala Ser Tyr Phe Arg
314      275      280      285
317 Gly Val Pro His Ser Ala Ser Pro Val Ser Pro Asp Gly Val His Ile
318      290      295      300
321 Pro Leu Lys Glu Tyr Ser Gly Gly Arg Ala Leu Gly Pro Gly Thr Gln
322 305      310      315      320
325 Arg Gly Lys Arg Ile Ala Ser Lys Val Lys His Phe Ala Phe Asp Arg
326      325      330      335
329 Lys Lys Arg His Tyr Gly Leu Gly Val Val Gly Asn Trp Leu Asn Arg
330      340      345      350
333 Ser Tyr Arg Arg Ser Ile Ser Ser Thr Val Gln Arg Gln Leu Glu Ser
334      355      360      365
337 Phe Asp Ser His Arg Pro Tyr Phe Thr Tyr Trp Leu Thr Phe Val His
338      370      375      380
341 Ile Ile Ile Thr Leu Leu Val Ile Cys Thr Tyr Gly Ile Ala Pro Val
342 385      390      395      400
345 Gly Phe Ala Gln His Val Thr Thr Gln Leu Val Leu Lys Asn Arg Gly
346      405      410      415
349 Val Tyr Glu Ser Val Lys Tyr Ile Gln Gln Glu Asn Phe Trp Ile Gly
350      420      425      430
353 Pro Ser Ser Ile Asp Leu Ile His Leu Gly Ala Lys Phe Ser Pro Cys
354      435      440      445
357 Ile Arg Lys Asp Gln Gln Ile Glu Gln Leu Val Arg Arg Glu Arg Asp
358      450      455      460
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VERIFICATION SUMMARY

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L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:28 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:25